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(from Email)

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AMENDMENTS TO THE CLAIMS

- 1 1. (Currently Amended) A method of managing electronic mail, the method comprising the  
2 computer-implemented steps of:  
  
3 automatically generating certain criteria based on contents of a plurality of electronic  
4 mail messages received over a network;  
5 wherein the step of automatically generating certain criteria includes:  
6 automatically determining what particular content to use to identify electronic  
7 mail messages as a first type of electronic mail message by performing  
8 steps that include determining that a threshold number of said plurality of  
9 electronic mail messages have a particular content, and  
10 in response to determining that a threshold number of said plurality of electronic  
11 mail messages have said particular content, generating one or more criteria  
12 that identifies electronic mail messages that have said particular content as  
13 the first type of electronic mail;  
14 receiving an electronic mail message over said network;  
15 determining whether said electronic mail message satisfies said one or more criteria;  
16 if said electronic mail message satisfies said one or more criteria, then processing said  
17 electronic mail message as said first type of electronic mail;  
18 if said electronic mail message does not satisfy said one or more criteria, then processing  
19 said electronic mail message as a second type of electronic mail;  
20 wherein said first type of electronic mail is processed differently than said second type of  
21 electronic mail; and

23       wherein at least one electronic mail message of said plurality of electronic mail messages  
24                  has not been classified, before determining that a threshold number of said  
25                  plurality of electronic mail messages have a particular content, as belonging to  
26                  said first type.

1     2. (Previously Presented) The method of Claim 1 wherein:  
2                  the method further comprises the step of generating a message signature for said  
3                  electronic mail message based on contents of said electronic mail message; and  
4                  the step of determining whether said electronic mail message satisfies one or more  
5                  criteria is based on said message signature.

1     3. (Previously Presented) The method of Claim 1, wherein determining that a threshold  
2                  number of said plurality of electronic mail messages have a particular content includes  
3                  determining that at least a portion of each of said plurality of electronic mail messages  
4                  have said particular content.

1     4. (Previously Presented) The method of Claim 1, wherein the step of generating certain  
2                  criteria based on contents of a plurality of electronic mail messages received over said  
3                  network includes tracking how many message signature elements of said plurality of  
4                  electronic mail messages match.

1    5. (Previously Presented) The method of Claim 1 wherein the step of generating certain  
2    criteria based on contents of a plurality of electronic mail messages received over said  
3    network includes the steps of:  
4                generating message signatures for each electronic mail message of said plurality of  
5                electronic mail messages, wherein each message signature includes one or more  
6                message signature elements; and  
7                counting how many of said one or more message signature elements match message  
8                signature elements from other message signatures.

1    6. (Previously Presented) The method of Claim 5 wherein the step of determining whether  
2    said electronic mail message satisfies said one or more criteria includes determining  
3    whether a message signature generated for said electronic mail message includes at least  
4    one message signature element that matches a threshold number of message signature  
5    elements of previously generated message signatures.

1    7. (Previously Presented) The method of Claim 6 wherein the step of determining whether a  
2    message signature generated for said electronic mail message includes at least one  
3    message signature element that matches a threshold number of message signature  
4    elements further includes determining whether a message signature generated for said  
5    electronic mail message includes at least one message signature element that matches a  
6    threshold number of message signature elements of previously generated message  
7    signatures that are associated with a period of time.

1 8. (Original) The method of Claim 1 wherein the step of processing said electronic mail  
2 message as a first type of electronic mail includes adding a bulk electronic mail flag to  
3 said electronic mail message.

1 9. (Original) The method of Claim 8, further including the steps of:  
2 after processing said electronic mail message as a first type of electronic mail,  
3 transmitting said electronic mail message to an electronic mail server;  
4 said electronic mail server receiving said electronic mail message;  
5 said electronic mail server determining whether said electronic mail message contains  
6 said bulk electronic mail flag; and  
7 if said electronic mail message contains said bulk electronic mail flag, then processing  
8 said electronic mail message without further verifying whether said electronic  
9 mail message is bulk electronic mail.

1 10. (Currently Amended) A method of managing electronic mail, the method comprising the  
2 steps of:  
3 a central server receiving message signatures from a set of electronic mail servers;  
4 automatically determining what particular content to use to identify electronic mail  
5 messages as bulk electronic mail by performing steps that include determining  
6 that a threshold number of message signatures received by said central server  
7 from said set of electronic mail servers match;  
8 in response to determining that a threshold number of message signatures received by  
9 said central server from said set of electronic mail servers match, generating a set

10           of one or more criteria that identifies electronic mail messages that have said  
11           particular content as bulk electronic mail;  
12           an electronic mail server determining whether a particular message signature for an  
13           electronic mail message satisfies said set of one or more criteria;  
14           if said particular message signature satisfies said set of one or more criteria, then said  
15           electronic mail server processing said electronic mail message as bulk electronic  
16           mail;  
17           wherein said threshold number of message signatures are generated from a plurality  
18           electronic mail messages; and  
19           wherein said plurality of electronic mail messages include at least one message that has  
20           not been identified, as bulk electronic mail, before determining that a threshold  
21           number of message signatures received by said central server from said set of  
22           electronic mail servers match.

1       11. (Canceled)

1       12. (Currently Amended) The method of Claim 10, wherein the step of a central server  
2           receiving from an electronic mail server message signatures includes receiving a set of  
3           one or more values generated by a one-way hash function.

1       13. (Original) The method of Claim 12, the method further including the step of transmitting  
2           one or more messages to said electronic mail server specifying changes to one or more  
3           routines invoked by said electronic mail server to generate message signatures.

- 1    14. (Original) The method of Claim 13, wherein the step of transmitting one or more  
2        messages includes transmitting platform-independent byte code.
- 1    15. (Currently Amended) A method of managing electronic mail transmitted over a network,  
2        the method comprising the steps of:  
3        a central server receiving from a set of electronic mail servers certain message signatures  
4            generated from a plurality electronic mail messages received by said set of  
5            electronic mail servers, wherein each message signature of said certain message  
6            signatures includes one or more message signature elements;  
7        said central server generating a count of how many times said one or more message  
8            signature elements are matched by message signature elements from message  
9            signatures generated for other electronic mail messages of said plurality of  
10          electronic mail messages;  
11          automatically determining what particular content to use to identify electronic mail  
12            messages as a first type of electronic mail message by performing steps that  
13            include determining that a threshold number of said plurality of electronic mail  
14            messages have a particular content based on said count; and  
15          in response to determining that a threshold number of said plurality of electronic mail  
16            messages have said particular content, generating one or more criteria that  
17            identifies electronic mail messages that have said particular content as the first  
18            type of electronic mail;  
19  
20          wherein at least one message of said plurality of electronic mail messages has not been  
21            classified, before determining that a threshold number of said plurality of

22            electronic mail messages have a particular content, as belonging to said first type;  
23            and  
24            said central server transmitting a message reflecting said one or more criteria.

1        16. (Previously Presented) The method of Claim 15, wherein:  
2            the step of a central server receiving includes receiving a particular recipient signature  
3            associated with a particular message signature; and  
4            the step of generating counts includes generating counts of how many times said one or  
5            more message signature elements match message signature elements that are:  
6            generated for other electronic mail messages, and  
7            associated with a recipient signature that differs from said particular recipient  
8            signature.

1        17. (Canceled)  
1        18. (Currently Amended) The method of Claim 16, wherein the step of transmitting messages  
2            includes transmitting message signature elements associated with counts greater than a  
3            threshold.

1        19 - 25. (Canceled)

1        26. (Currently Amended) A computer-readable medium carrying one or more sequences of  
2            one or more instructions for managing electronic mail, wherein the execution of the one

3 or more sequences of the one or more instructions causes the one or more processors to  
4 perform the steps of:

5 automatically generating certain criteria based on contents of a plurality of electronic  
6 mail messages received over a network;

7 wherein the step of automatically generating certain criteria includes:

8 automatically determining what particular content to use to identify electronic  
9 mail messages as a first type of electronic mail message by performing  
10 steps that include determining that a threshold number of said plurality of  
11 electronic mail messages have a particular content, and  
12 in response to determining that a threshold number of said plurality of electronic  
13 mail messages have said particular content, generating one or more criteria  
14 that identifies electronic mail messages that have said particular content as  
15 the first type of electronic mail;

16 receiving an electronic mail message over said network;

18 determining whether said electronic mail message satisfies said one or more criteria;

19 if said electronic mail message satisfies said one or more criteria, then processing said  
20 electronic mail message as said first type of electronic mail;

21 if said electronic mail message does not satisfy said one or more criteria, then processing  
22 said electronic mail message as a second type of electronic mail;

23 wherein said first type of electronic mail is processed differently than said second type of  
24 electronic mail; and

25 wherein at least one electronic mail message of said plurality of electronic mail messages  
26 has not been classified, before determining that a threshold number of said

27           plurality of electronic mail messages have a particular content, as belonging to  
28           said first type.

1       27. (Previously Presented) The computer-readable medium of Claim 26 wherein:  
2           the computer-readable medium further comprises sequences of instructions for  
3           performing the step of generating a message signature for said electronic mail  
4           message based on contents of said electronic mail message; and  
5           the step of determining whether said electronic mail message satisfies said one or more is  
6           based on said message signature.

1       28. (Previously Presented) The computer-readable medium of Claim 26 wherein determining  
2           that a threshold number of said plurality of electronic mail messages have a particular  
3           content includes determining that at least a portion of each of said plurality of electronic  
4           mail messages have said particular content.

1       29. (Previously Presented) A computer-readable medium carrying one or more sequences of  
2           one or more instructions for managing electronic mail, wherein the execution of the one  
3           or more sequences of the one or more instructions causes the one or more processors to  
4           perform the steps of:  
5           a central server receiving message signatures from a set of electronic mail servers;  
6           automatically determining what particular content to use to identify electronic mail  
7           messages as bulk electronic mail by performing steps that include determining  
8           that a threshold number of message signatures received by said central server  
9           from said set of electronic mail servers match;

10       in response to determining that a threshold number of message signatures received by  
11            said central server from said set of electronic mail servers match, generating a set  
12            of one or more criteria that identifies electronic mail messages that have said  
13            particular content as bulk electronic mail;  
14  
15        an electronic mail server determining whether a particular message signature for an  
16            electronic mail message satisfies said set of one or more criteria;  
17        if said particular message signature satisfies said set of one or more criteria, then said  
18            electronic mail server processing said electronic mail message as bulk electronic  
19            mail;  
20        wherein said threshold number of message signatures are generated from a plurality  
21            electronic mail messages; and  
22        wherein said plurality of electronic mail messages include at least one message that has  
23            not been identified, as bulk electronic mail, before determining that a threshold  
24            number of message signatures received by said central server from said set of  
25            electronic mail servers match.

1       30. (Canceled)

1       31. (Currently Amended) A computer-readable medium carrying one or more sequences of  
2            one or more instructions for managing electronic mail, wherein the execution of the one  
3            or more sequences of the one or more instructions causes the one or more processors to  
4            perform the steps of:  
5            a central server receiving from a set of electronic mail servers certain message signatures  
6            generated from a plurality electronic mail messages received by said set of

7           electronic mail servers, wherein each message signature of said certain message  
8           signatures includes one or more message signature elements;  
9           said central server generating a count of how many times said one or more message  
10          signature elements are matched by message signature elements from message  
11          signatures generated for other electronic mail messages of said plurality of  
12          electronic mail messages;  
13          automatically determining what particular content to use to identify electronic mail  
14          messages as a first type of electronic mail message by performing steps that  
15          include determining that a threshold number of said plurality of electronic mail  
16          messages have a particular content based on said count; and  
17          in response to determining that a threshold number of said plurality of electronic mail  
18          messages have said particular content, generating one or more criteria that  
19          identifies electronic mail messages that have said particular content as the first  
20          type of electronic mail;  
21  
22          wherein at least one message of said plurality of electronic mail messages has not been  
23          classified, before determining that a threshold number of said plurality of  
24          electronic mail messages have a particular content, as belonging to said first type;  
25          and  
26          said central server transmitting a message reflecting said one or more criteria.  
27

1    38. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of  
2       generating certain criteria based on contents of a plurality of electronic mail messages  
3       received over said network includes tracking how many message signature elements of  
4       said plurality of electronic mail messages match.

1    39. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of  
2       generating certain criteria based on contents of a plurality of electronic mail messages  
3       received over said network includes the steps of:  
4           generating message signatures for each electronic mail message of said plurality of  
5           electronic mail messages, wherein each message signature includes one or more  
6           message signature elements; and  
7           counting how many of said one or more message signature elements match message  
8           signature elements from other message signatures.

1    40. (Previously Presented) The computer-readable medium of Claim 39 wherein the step of  
2       determining whether said electronic mail message satisfies said one or more criteria  
3       includes determining whether a message signature generated for said electronic mail  
4       message includes at least one message signature element that matches a threshold number  
5       of message signature elements of previously generated message signatures.

1    41. (Previously Presented) The computer-readable medium of Claim 40 wherein the step of  
2       determining whether a message signature generated for said electronic mail message  
3       includes at least one message signature element that matches a threshold number of

4 message signature elements further includes determining whether a message signature  
5 generated for said electronic mail message includes at least one message signature  
6 element that matches a threshold number of message signature elements of previously  
7 generated message signatures that are associated with a period of time.

1 42. (Previously Presented) The computer-readable medium of Claim 26 wherein the step of  
2 processing said electronic mail message as a first type of electronic mail includes adding  
3 a bulk electronic mail flag to said electronic mail message.

1 43. (Previously Presented) The computer-readable medium of Claim 42, the steps further  
2 including

3 after processing said electronic mail message as a first type of electronic mail,  
4 transmitting said electronic mail message to an electronic mail server;  
5 said electronic mail server receiving said electronic mail message;  
6 said electronic mail server determining whether said electronic mail message contains  
7 said bulk electronic mail flag; and  
8 if said electronic mail message contains said bulk electronic mail flag, then processing  
9 said electronic mail message without further verifying whether said electronic  
10 mail message is bulk electronic mail.

1 44. (Previously Presented) The computer-readable medium of Claim 29, wherein the step of  
2 a central server receiving from an electronic mail server message signatures includes  
3 receiving a set of one or more values generated by a one-way hash function.

- 1    45. (Previously Presented) The computer-readable medium of Claim 44, the steps further  
2        including the step of transmitting one or more messages to said electronic mail server  
3        specifying changes to one or more routines invoked by said electronic mail server to  
4        generate message signatures.
- 1    46. (Previously Presented) The computer-readable medium of Claim 45, wherein the step of  
2        transmitting one or more messages includes transmitting platform-independent byte code.
- 1    47. (Previously Presented) The computer-readable medium of Claim 31, wherein:  
2        the step of a central server receiving includes receiving a particular recipient signature  
3                associated with a particular message signature; and  
4        the step of generating counts includes generating counts of how many times said one or  
5                more message signature elements match message signature elements that are:  
6                generated for other electronic mail messages, and  
7                associated with a recipient signature that differs from said particular recipient  
8                signature.
- 1    48. (Canceled)
- 1    49. (Currently Amended) The computer-readable medium of Claim 47, wherein the step of  
2        transmitting messages includes transmitting message signature elements associated with  
3        counts greater than a threshold.

1    50. (Currently Amended) A method of managing electronic mail, the method comprising the  
2    computer-implemented steps of:  
3       automatically generating certain criteria based on contents of a plurality of electronic  
4              mail messages received over a network;  
5       wherein the step of automatically generating certain criteria includes, in response to  
6              determining that a threshold number of said plurality of electronic mail messages  
7              have a particular content, generating one or more criteria that classifies electronic  
8              mail messages that have said particular content as a first type of electronic mail;  
9       receiving an electronic mail message over said network;  
10      determining whether said electronic mail message satisfies said one or more criteria;  
11      if said electronic mail message satisfies said one or more criteria, then processing said  
12              electronic mail message as said first type of electronic mail;  
13      if said electronic mail message does not satisfy said one or more criteria, then processing  
14              said electronic mail message as a second type of electronic mail;  
15      wherein said first type of electronic mail is processed differently than said second type of  
16              electronic mail;  
17      wherein the step of determining that a threshold number of said plurality of electronic  
18              mail messages have a particular content includes the steps of:  
19              generating message signatures for each electronic mail message of said plurality  
20              of electronic mail messages, wherein each message signature includes one  
21              or more signature elements, and

22                   counting how many of said one or more signature elements match signature  
23                   elements from other message signatures; and  
24                   wherein at least one electronic mail message of said plurality of electronic mail  
25                   messages has not been classified, before determining that a threshold number of  
26                   said plurality of electronic mail messages have a particular content, as belonging  
27                   to said first type.

28

1       51. (Previously Presented) The method of Claim 50 wherein the step of determining whether  
2           said electronic mail message satisfies said one or more criteria includes determining  
3           whether a message signature generated for said electronic mail message includes at least  
4           one signature element that matches a threshold number of signature elements of  
5           previously generated message signatures.

1       52. (Previously Presented) The method of Claim 51 wherein the step of determining whether  
2           a message signature generated for said electronic mail message includes at least one  
3           signature element that matches a threshold number of signature elements further includes  
4           determining whether a message signature generated for said electronic mail message  
5           includes at least one signature element that matches a threshold number of signature  
6           elements of previously generated message signatures that are associated with a period of  
7           time.

1       53. (Currently Amended) A computer-readable medium carrying one or more sequences of  
2           one or more instructions for managing electronic mail, wherein the execution of the one

3 or more sequences of the one or more instructions causes the one or more processors to  
4 perform the steps of:  
5 automatically generating certain criteria based on contents of a plurality of electronic  
6 mail messages received over a network;  
7 wherein the step of automatically generating certain criteria includes, in response to  
8 determining that a threshold number of said plurality of electronic mail messages  
9 have a particular content, generating one or more criteria that classifies electronic  
10 mail messages that have said particular content as a first type of electronic mail;  
11 receiving an electronic mail message over said network;  
12 determining whether said electronic mail message satisfies said one or more criteria;  
13 if said electronic mail message satisfies said one or more criteria, then processing said  
14 electronic mail message as said first type of electronic mail;  
15 if said electronic mail message does not satisfy said one or more criteria, then processing  
16 said electronic mail message as a second type of electronic mail;  
17 wherein said first type of electronic mail is processed differently than said second type of  
18 electronic mail;  
19 wherein the step of determining that a threshold number of said plurality of electronic  
20 mail messages have a particular content includes the steps of:  
21 generating message signatures for each electronic mail message of said plurality  
22 of electronic mail messages, wherein each message signature includes one  
23 or more signature elements, and  
24 counting how many of said one or more signature elements match signature  
25 elements from other message signatures; and

26 wherein at least one electronic mail message of said plurality of electronic mail  
27 messages has not been classified, before determining that a threshold number of  
28 said plurality of electronic mail messages have a particular content, as belonging  
29 to said first type.

1 54. (Previously Presented) The computer-readable medium of Claim 53 wherein the step of  
2 determining whether said electronic mail message satisfies said one or more criteria  
3 includes determining whether a message signature generated for said electronic mail  
4 message includes at least one signature element that matches a threshold number of  
5 signature elements of previously generated message signatures.

1 55. (Previously Presented) The computer-readable medium of Claim 54 wherein the step of  
2 determining whether a message signature generated for said electronic mail message  
3 includes at least one signature element that matches a threshold number of signature  
4 elements further includes determining whether a message signature generated for said  
5 electronic mail message includes at least one signature element that matches a threshold  
6 number of signature elements of previously generated message signatures that are  
7 associated with a period of time.